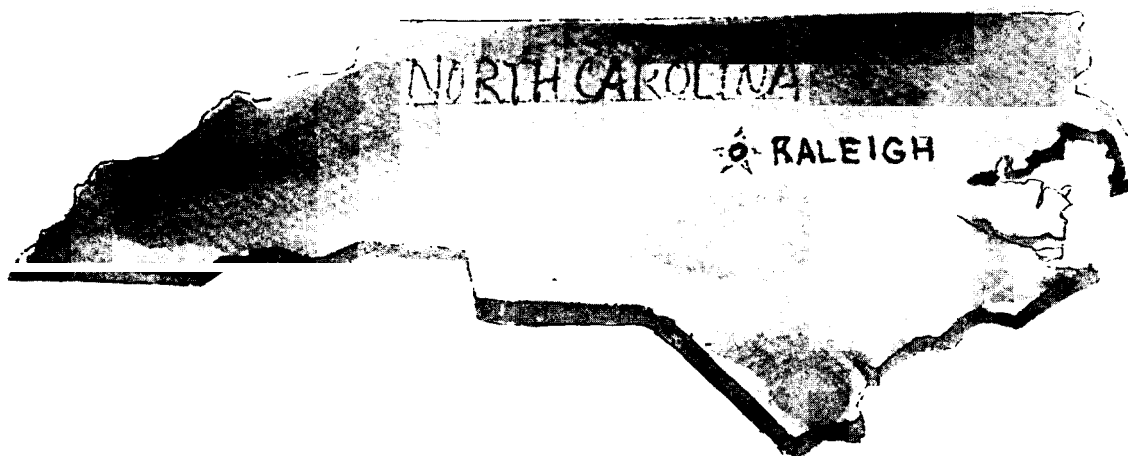


## **SECTION ELEVEN**

# Case Studies



## Raleigh, North Carolina

In October 1989, the Raleigh, North Carolina Public Utilities Department (the city's water and sewer utility) sponsored a pilot HHW program at the Department's Operations Center. The program had two objectives: to educate the citizens of Raleigh about HHW and proper HHW management methods; and to collect HHW from Raleigh residents and recycle some of the collected wastes.

The program met both of these goals, demonstrating that a water utility can effectively *design* and implement a HHW collection. The first collection day in 1989 drew an extraordinary number of participants for a first-time drop-off HHW collection—a total of 1,149, or 1.4 percent of the targeted 80,000 households.

### Planning the Collection

The collection was planned by a HHW steering committee that included representatives from the public utilities department the Governor's Waste Management Board; the North Carolina Hazardous Waste Branch; the Institute for Environmental Studies at Chapel Hill; the City of Raleigh's Environmental Quality Advisory Board; the city's public works, fire, transportation, police, and safety departments; and others. The committee began planning for the collection day a full year before the event was held.

### Publicity

Advertising for the October collection started at the beginning of January. A variety of publicity and public education methods were used:

- More than 40 press releases were prepared for newspapers, TV, and radio.
- Five hundred letters were mailed to civic organizations.
- Presentations with videotapes were delivered at civic group meetings.
- Bright yellow inserts were placed in every Raleigh water bill approximately six weeks before the collection.
- A member of the Environmental Quality Advisory Board sponsored an entire afternoon on a classical music radio station that included repeated announcements about the HHW collection.
- Raleigh's cable television station aired an informational program on HHW several times.

Graduate students from a local university surveyed the collection participants to find out how they heard about the collection. The results are shown below. (Note: The total percentage exceeds 100 because some people heard about the collection program from more than one source.)

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Newspaper	<b>48%</b>
Water bill inserts	34%
Radio	16%
Television	14%
Other forms of advertising	8%
Civic groups	3%

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Among the factors credited for the remarkable turnout at the collection was the steering committee's ability to personalize the issue when presenting it to the community. The program manager focused her advertising efforts to ensure that people understood that HHW management is an environmental issue that literally "hits home."

The highlight of this personalized effort was a press conference held in a homeowner's basement. This enabled the press to actually see what HHW is, to recognize that it is something most people have in their own homes, and to take advantage of a photo opportunity. Several major newspapers ran feature articles about HHW following this press conference. Television stations also included the press conference in their news reports.

## Types of HHW Collected and Waste Management Methods Used

The hazardous waste contractor for the collection sent 355 drums of collected HHW for hazardous waste treatment and/or disposal. Three types of materials brought

to the HHW collection were identified for recycling: good-quality latex paint, used oil, and automobile batteries. More than 100 gallons of latex paint were donated to the Raleigh Housing Authority for use in its projects. An oil service company in Raleigh accepted 2,800 gallons of motor oil for processing as industrial-grade fuel oil. A battery firm in Wilson, North Carolina, took 105 automotive batteries for recycling. Wastes not accepted at the collection included radioactive, biological wastes, explosives, ammunition, and nonhazardous waste.

## Funding and Costs

Except for a one-time \$10,000 matching grant from the state, Raleigh's program was funded entirely from the city's Department of Public Utilities budget. HHW collection (waste management and public education/publicity) was performed under contract; these direct costs totaled \$141,147. Indirect costs—the cost of providing city staff on site (police and fire) and the hours spent by the HHW steering committee to plan the program—totaled an additional \$26,017. City employees bulked used motor oil, directed traffic, and were available for emergency response.

## Expanding the Program

On April 7, 1990, Raleigh and Wake County held a collection open to the entire county. This collection drew 1,778 participants. The cost of the event was \$175,210. It was funded by a separate line item on the city water and sewer bill (40¢/month), and the county share was funded through the landfill tipping fee.

An ad hoc group of Raleigh public works, utility, and transportation employees managed the program. The group was responsible for expanding the program to

## CASE STUDIES

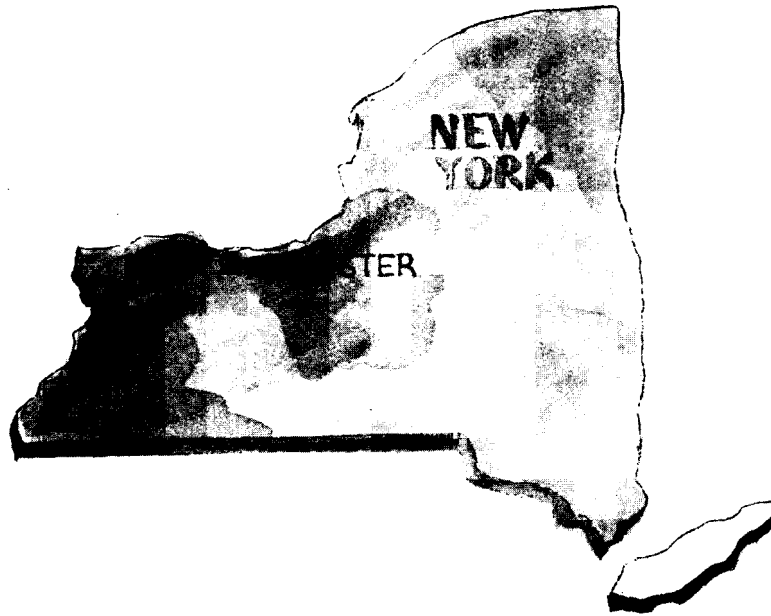
the full county and for developing a HHW curriculum for local schools. The group also is planning future collections.

The most effective publicity techniques for the April 1990 collection were flyers sent with water bills one month before the event and a series of press releases in the final week before the collection. The base-ment press conference was not repeated.

Organizers of the April 1990 event set a goal of increased recycling. A local paint company consolidated and blended 2,500 gallons of latex paint, charging only for the five-gallon plastic buckets used (\$2 apiece). The City Housing Authority will save an estimated \$9,500 by using this paint. In addition, the Parks and Recreation Department received 12 drums of pesticides from the collection.

The collection organizers made several other improvements over the 1989 event. The two most frequent suggestions from participants at the first collection were to reduce waiting time and to ban smoking. In response to these suggestions, organizers staffed two sites with 100 contractor and local personnel, reducing the waiting time at the second event to a maximum of 15 minutes. In addition, the sites now have permanent signs that ban smoking. In 1990, Habitat for Humanity bulked the good-quality latex paint at the collection site and then used it to paint low-income housing. The hazardous waste contractor analyzed the bulked latex paint for heavy metals. None of the bulk paint was rejected.

Source: *Cindy Kling, City of Raleigh, Public Utilities Department.*



## Monroe County, New York

**M**onroe County in upstate New York held its first HHW collection on October 21, 1989, in the City of Rochester. The collection was attended by 1,400 of the 250,000 households in the county (0.56 percent participation rate) even though the day was overcast and cold. The site was open from 9 a.m. to 2 p.m. Lines formed as early as 8:20 a.m. Program organizers believe that hundreds of additional households did not participate because of the long wait or because many were turned away at 2 p.m.

## Planning the Collection

Initial planning meetings began 18 months before the collection. A 12-person volunteer subcommittee of the county's Environmental Management Council (EMC) conducted background research, and the County unanimously accepted the EMC's recommendations in January 1990.

Monroe County established a committee of county professionals from the departments of solid waste, planning, health, and fire, as well as legislative and legal representatives, to plan and implement the collection event. The EMC coordinator was the project manager for the event. The County Division of Solid Waste carried out the details of site planning and provided the site coordinator. Chemists from the County Health Department sampled and handled the

used oil and automotive batteries. The hazardous materials team was on site all day and the bomb squad was on call. County and municipal police and hospitals were notified about the day's event.

## Publicity

The Monroe County EMC Household Hazardous Waste Committee was responsible for education for the event. The planning committee arranged for publicity before the collection day through newspapers, TV, radio, flyers, and slide shows. Eastman Kodak, a local employer, also publicized the event in its in-house newsletter and encouraged all employees to participate. Kodak also purchased full-page newspaper ads about the company's recycling efforts and included a quarter of a page in the ads about the HHW collection.

## CASE STUDIES

### Types of HHW Collected and Waste Management Methods Used

The program collected 3,000 gallons of used oil, 13,375 pounds of automotive batteries, and 80,000 pounds of other types of HHW. Used oil was reprocessed into fuel oil by a local firm, and automobile batteries were sold to a local broker for recycling. Wastes excluded from the collection included unlabeled waste, latex paint, radioactive and biohazardous waste, explosives, shock-sensitive wastes, and propane tanks.

### Funding and Costs

To pay for the collection program, Monroe County spent \$62,000, the City of Rochester contributed \$5,000, and local businesses donated \$57,000 (as well as in-kind contributions such as free publicity). Eastman Kodak saved the county an additional \$32,410 in waste management costs by accepting 384 thirty-gallon drums and 135 five-gallon pails of paints and solvents. These wastes were burned at Kodak's hazardous waste incinerator at no cost to the

county. Thus, the total cost of the program, including all monetary and in-kind contributions, exceeded \$150,000.

### Program Evaluation

The county considered its first-time HHW collection a tremendous success. Recommendations for future one-day collections include designating an individual to assist the media on site (no one was available for this on the collection day) and using volunteers in shifts so that they can take breaks.

The only significant problem at the event was that many potential participants had to be turned away. Collection organizers do not believe that increased staffing would have solved this problem—the contractor provided 24 staff people and worked efficiently, processing four households per minute. Instead, the county has decided to establish a permanent HHW collection program. The county hired an engineering firm to design a permanent facility and selected a site for the program. The facility opened in the spring of 1992.

*Source: Alice Young, League of Women Voters, Rochester Metro, Chair Monroe County Environmental Management Council, Household Hazardous Waste Committee.*

## **APPENDICES**

- A. Hazardous Waste Laws and Regulations
- B. State and Regional Hazardous Waste Contacts
- C. Information Resources
- D. Sample Participant Questionnaire